Fact Sheet: Maryland's Surveillance and Preparedness for Radiation

Background

There is one Fixed Nuclear Facility in Maryland, Calvert Cliffs Power Plant, and one is Pennsylvania, Peach Bottom, that have the potential to impact the health and safety of Maryland residents. Both plants are regulated and inspected by multiple federal agencies. Both plants are monitored by Maryland state agencies as well.

The operators of both plants also tasked to monitor and inspect their facilities and are active partners in the Maryland plans and in response to radiation emergencies.

The Radiation Monitoring and Response Programs are the result of collaboration among several state agencies including Maryland Emergency Management Agency, Department of the Environment, Department of Natural Resources, Department of Agriculture, and the Department of Health and Mental Hygiene.

Monitoring and Surveillance

The Department of Natural Resources supports fixed monitoring stations strategically placed in the immediate vicinity of both plants. These air filtering monitoring stations sample the air around the facilities. In addition, sampling includes air, water, milk, oyster, fin fish, sediments and submerged aquatic vegetation. These samples are tested in the State Public Health Laboratory, one of only ten in the nation that are certified to do the tests, on a routine basis. The Department of Natural Resources is responsible for analyzing the test results and, working with sister agencies, determining the potential health and safety impacts.

The Department of Health and Mental Hygiene and the Maryland Department of Agriculture routinely sample, test and monitor milk and other food products for a variety of contaminants including radiation.

Public water systems in Maryland are monitored annually for radiation levels in source water, in compliance with the Safe Drinking Water Act. There are other air-sampling monitors in systems operated by the federal government and Baltimore City.

Planning and Preparedness

The Maryland Emergency Management Agency is responsible for overall preparedness for the state. The Agency revised and updated the state's Radiation Response Plan in 2010 and coordinates the planning, training, exercising and response to radiation incidents.

The Maryland Department of the Environment is the lead agency for radiation preparedness and response and also coordinates with the relevant federal agencies such as the Nuclear Regulatory Commission and the Environmental Protection Agency to ensure that Maryland plans current and concert with federal guidelines.

Maryland's agencies routinely train staff and hold exercises related to the Radiation Response Plan. Exercises are held at least once a year. Federal exercises include scenarios with accidental releases from a fixed nuclear facility with a direct human impact (people) and environmental contamination that could affect food supplies. The plans are designed to protect our people and our food supply which is so important to our economy.

Response

Multi-layers systems are in place to notify residents and workers within the 10 mile Emergency Planning Zone of the facility that an accidental release of radiation has occurred. The systems include warning sirens, pager and phone alerting systems such as Reverse 9-1-1. The systems are tested frequently.

Depending on the severity of the circumstances, residents and workers would be instructed to take protective actions. Such actions include sheltering-in-place, evacuation, and, perhaps specific instruction in decontamination measures. The plant operators send updated safety information to the residents and workers in the Emergency Planning Zones annually. Evacuation routes have been planned and provided to the residents and workers.

Medical interventions, including administering Potassium Iodide (KI) or other countermeasures, may also be recommended. The Maryland Department of the Environment has teamed with the Local Health Departments within the affected Emergency Planning Zones of both plants to provide a supply of KI. Residents and workers in the Emergency Planning Zones have been supplied with doses of KI to have on hand to take when directed by the Secretary of the Maryland Department of the Environment or the Secretary of the Department of Health and Mental Hygiene.

Each of the Local Health Departments in the zone has also pre-positioned additional doses of KI in strategic locations and also maintain a cache for new residents and workers. Each Local Health Department has a plan for the emergency distribution of KI through multiple outlets. Maryland has access to additional supplies of KI, if needed, through the Strategic National Stockpile program.

If an accidental release should occur, officials from the Department of Health and Mental Hygiene, the Maryland Department of the Environment, and the Department of Agriculture will enter the potentially contaminated environment to secure samples including soil and water for testing to determine the severity and extent of the contamination, if any.

The Department of Health and Mental Hygiene would implement long term health surveillance of residents and workers while the Maryland Department of the Environment and the Department of Natural Resources would implement the surveillance of environmental impacts and environmental clean-up. All of these activities would be undertaken with close coordination of state and federal authorities.